AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the Application.

1. (Currently Amended) A medical implant for placement into a specific implant region within a biological organism comprising: an implant body at least partially constructed of a bulk-solidifying amorphous alloy having an elastic strain limit of around 1.2% or more, said alloy having a composition that is free from ~~at least one of the metals selected from the group consisting of~~ Al, ~~or~~ Ni ~~and Be~~;

wherein the implant body has a plurality of ~~precision engineered~~ surface features formed on an outer surface thereof ~~that~~, wherein the surface features ~~are substantially uniform and~~ have an average roughness and ~~an average particle size~~ such that the outer surface of the implant body has biological, mechanical and morphological compatibility with the implant region.

2. (Previously Presented) The medical implant as described in claim 1, wherein the features on the outer surface of the implant body comprise a plurality of pores with diameters between about 10 to 500 μm.

3. (Previously Presented) The medical implant as described in claim 1, wherein the features on the outer surface of the implant body comprise a plurality of pores with diameters between about 100 to 500 μm.

4. (Previously Presented) The medical implant as described in claim 1, wherein the features on the outer surface of the implant body comprise a plurality of pores with diameters between about 100 to 200 μm.

5. (Original) The medical implant as described in claim 1, wherein the outer surface of the implant body has an average roughness of between 1 to 50 μm.

6. (Previously Presented) The medical implant as described in claim 1, wherein the features on the outer surface of the implant body comprise a surface texture selected from the group consisting of concave, convex, and mixture of concave and convex.

7. (Currently Amended) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy is described by the following molecular formula: $(Zr,Ti)_a(Ni,Cu,Fe)_b(Be,Al,Si,B)_c$, wherein "a" is in the range of from about 30 to 75, "b" is in the range of from about 5 to 60, and "c" in the range of from about 0 to 50 in atomic percentages, wherein the alloy is free from ~~at least one material selected from the group consisting of Ni, Be and~~ or Al.

8. (Original) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy is described substantially by the following molecular formula: $(Zr)_a(Nb,Ti)_b(Cu)_c(Al)_d$, where a is in the range of from 45 to 65, b is in the range of from 0 to 10, c is in the range of from 20 to 40, and d in the range of from 7.5 to 15 in atomic percentages.

9. (Currently Amended) ~~A~~ The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy has an elastic strain limit of around 1.8% or more.

10. (Original) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy has a high fracture toughness of at least about 10 ksi- in.

11. (Original) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy has a high hardness value of at least about 5.0 GPa.

12. (Original) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy is based on ferrous metals.

13. (Currently Amended) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy ~~is a Zr/Ti-base alloy~~comprises Zr and Ti, and further comprises a ductile metallic crystalline phase precipitate.

14 -16. (Canceled)

17. (Original) The medical implant as described in claim 1, wherein at least a portion of the implant body is constructed of a conventional implantation material.

18. (Original) The medical implant as described in claim 1, wherein at least a portion of the implant body is coated with a biocompatible resin cement.

19. (Original) The medical implant as described in claim 1, wherein the portion of the implant body formed from the bulk-solidifying amorphous alloy has a section thickness of at least 0.5 mm.

20. (Original) The medical implant as described in claim 1, wherein the implant body is in the form of a load bearing member.

21. (Original) The medical implant as described in claim 1, wherein the implant body is in the form of an articulating joint.

22. (Original) The medical implant as described in claim 1, wherein the bulk-solidifying amorphous alloy has a supercooled liquid region of more than 90 °C.

23-36. (Canceled)

37. (New) An object for placement into a region comprising: a body at least partially constructed of a bulk-solidifying amorphous alloy having an elastic strain limit of around 1.2% or more;

wherein the body has a plurality of micro-structured surface features on an outer surface thereof, wherein the micro-structured surface features have an average roughness and a surface morphology such that the outer surface of the body has mechanical and morphological compatibility with the region.

38. (New) The object of claim 37, wherein the micro-structural features on the outer surface of the body comprise a plurality of pores with diameters between about 10 to 500 μm.

39. (New) The object of claim 37, wherein the micro-structural features are replications of sub-micron or micron sized mold features on the outer surface of the body.

40. (New) The object of claim 37, wherein the micro-structural features have morphological features having dimensions in a micron scale range or a sub-micron scale range.

41. (New) The object of claim 37, the outer surface of the body has an average roughness of between 1 to 50 μm.

42. (New) The object of claim 37, wherein the micro-structural features on the outer surface of the body comprise a surface texture selected from the group consisting of concave, convex, and mixture of concave and convex.

43. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy is described by the following molecular formula: $(Zr,Ti)_a(Ni,Cu,Fe)_b(Be,Al,Si,B)_c$, wherein "a" is in the range of from about 30 to 75, "b" is in the range of from about 5 to 60, and "c" in the range of from about 0 to 50 in atomic percentages, wherein the alloy is free from at least one material selected from the group consisting of Ni, Be and Al.

44. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy is described substantially by the following molecular formula: $(Zr)_a(Nb,Ti)_b(Cu)_c(Al)_d$, where a is in the range of from 45 to 65, b is in the range of from 0 to 10, c is in the range of from 20 to 40, and d in the range of from 7.5 to 15 in atomic percentages.

45. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy has an elastic strain limit of around 1.8% or more.

46. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy has a high fracture toughness of at least about 10 ksi- in.

47. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy has a high hardness value of at least about 5.0 GPa.

48. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy is based on ferrous metals.

49. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy comprises Zr and Ti, and further comprises a ductile metallic crystalline phase precipitate.

50. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy is Al, Ni or Be free.

51. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy is Al or Ni free.

52. (New) The object of claim 37, wherein the portion of the body formed from the bulk-solidifying amorphous alloy has a section thickness of at least 0.5 mm.

53. (New) The object of claim 37, wherein the body is in the form of a load bearing member.

54. (New) The object of claim 37, wherein the body is in the form of an articulating joint.

55. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy has a supercooled liquid region of more than 90 °C.

56. (New) The object of claim 37, wherein the bulk-solidifying amorphous alloy comprises Be.

57. (New) The medical implant of claim 1, wherein the bulk-solidifying amorphous alloy comprises Be.